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12.0 NOISE CONTROL

12.1 INTRODUCTION

The Project will develop, establish and maintain a Noise Control (NC) Program. The purpose of the NC Program is to establish the criteria and methodologies to manage noise control measures during the design, construction, and operation of the Project.

The Project will prepare a NC Plan that will serve as a guide to the implementation of the NC Program through coordination with the Technical and other Environmental Protection Programs through all phases of the Project.

Noise impact related to the project will be greatest during the construction phase. Primary sources of construction noise are the operation of construction equipment, aircraft usage, and blasting. Noise will also be caused by compressor station facilities during pipeline operations.

12.2 CRITERIA

The Project recognizes the sensitivity of the noise issue as it relates to occupational safety, community relations, and the well-being of wildlife. The NC Program will define and quantify project-related noise sources and determine the optimum methods of noise mitigation.

12.2.1 Basic Project Criteria

- Prevention of adverse noise impacts to human populations and wildlife, whenever possible, by means of pre-construction planning and design.
- Reduction of adverse noise impacts that cannot be completely prevented, by means of pre-construction planning and design.

12.2.2 Statutes, Regulations and Other Applicable Authorities

- 29 CFR 1926.101, Safety and Health Regulations for Construction, Hearing Protection.
- 18 CFR 380.12, "FERC's Environmental Reports for Natural Gas Act Applications," and FERC environmental policy guidelines thereunder.
- Federal Right-of-Way Grant for the Alaska Natural Gas Transportation System Alaska Segment, Serial No. F-24538 (December 1, 1980), as such may be updated and/or amended from time to time.
- Federal Energy Regulatory Commission conditional certificate of public convenience and necessity, issued on December 16, 1977, as such is finalized.

12.3 METHODOLOGIES

12.3.1 Temporary Facilities and Construction

Noise levels associated with the short-term operation of typical construction equipment have been found to range from less than 70 dB (A) to about 105 dB (A) at distances of 50 feet. Measured at the operator position, industrial machinery and equipment noise has been found to range from approximately 80 dB (A) to in excess of 115 dB (A).

The Project will require that equipment and vehicles will be with appropriate mufflers and silencers to mitigate construction noise. In addition, OSHA regulations regarding occupational noise exposure will be followed. Ear protection all workers in accordance with common engineering practice in compliance with federal and state worker safety standards will wear devices during construction and operation.

The NC Program will coordinate with the Fish and Wildlife Protection Program to identify potential noise sensitive species or habitat locations and time periods and develop horizontal, vertical, and temporal restrictions based upon the identification of sensitive species, habitats, or seasonal periods.

12.3.2 Permanent Facilities

Compressor stations constitute essentially the only significant noise source during pipeline operation. Most continuous compressor station noise will result from the operation of the gas turbine engines and driven equipment, which are located in totally enclosed buildings. In the present station design gas turbines will be provided with intake and outlet silencers, as well as individual fire protection enclosures.

It has been estimated that turbines, with individual enclosures, may generate noise levels ranging from 90-95 dB (A) within the building without enclosure, noise may exceed 100 dB (A). Total untreated station yard noise may be in the 80-90 dB range (Hensala, 1979).

Periodic depressurization (“blowdown") of station equipment and gas piping is a source of intermittent noise. Scheduled blow down for maintenance will occur about twice each year and persist for an estimated 2 to 15 minutes. Emergency blow down will occur as necessary. Maximum noise levels ranging from about 80 dB (A) to 140 dB (A) at distances of 3000 to 100 feet, respectively, from the depressurization point could be associated with blow down events in the absence of noise control (U.S. DOI, 1976).

To assess and quantify Compressor Station noise impact, a noise-modeling program will be conducted. Using manufacturer's equipment noise data and a computerized noise estimation technique, noise levels inside buildings, within the station grounds, and at various distances from the station will be calculated. Both the normal operating and blow down conditions will be examined. Site-specific considerations such as atmospheric conditions and surrounding vegetation will be accounted for in the calculations.

Noise treatment measures will be assessed in detail during the modeling program; These measures may include acoustic enclosures and barriers, compressor suction and discharge silencers, insulated structural panels, vibration dampeners, piping insulation, and low-noise

pressure letdown valves, in addition to the gas turbine noise treatment devices previously discussed.

Noise at compressor station sites will be tested before and after compressor installation to ensure noise guidelines are met.

The Project will ensure that appropriate noise control measures are included in the compressor station facilities such that all occupational standards and any local or state noise ordinances are satisfied. Critical wildlife habitats or seasonal wildlife concentrations located within close proximity to any stations will be afforded special emphasis.

12.4 FIGURES AND TABLES

(None)

12.5 BIBLIOGRAPHY

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12.6 ATTACHMENTS

(None)